

**ICC-ES Evaluation Report****ESR-1228**

Reissued March 1, 2009

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**DIVISION: 15—MECHANICAL**  
**Section: 15820—Duct Accessories****REPORT HOLDER:****M&M MANUFACTURING, LLC**  
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[www.mmmfg.com](http://www.mmmfg.com)**ADDITIONAL LISTEES:****CODY COMPANY, INC.**  
POST OFFICE BOX 1320  
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[www.codycompany.com](http://www.codycompany.com)**EVALUATION SUBJECT:****DUCTITE® R-6 AND DUCTITE® R-8 FITTING INSULATORS****1.0 EVALUATION SCOPE****Compliance with the following codes:**

- 2006 *International Building Code*® (IBC)
- 2006 *International Residential Code*® (IRC)
- 2006 *International Mechanical Code*® (IMC)

**Properties evaluated:**

- Surface-burning characteristics
- High-temperature resistance
- Thermal resistance

**2.0 USES**

DucTite® R-6 and DucTite® R-8 air duct fitting insulators provide unprotected insulation on the exterior of aboveground metal air duct fittings such as, but not limited to, outlet register boxes, register boots, wyes, tees, elbows, stack boots and reducers.

**3.0 DESCRIPTION****3.1 General:**

DucTite® R-6 and DucTite® R-8 insulators are formed from molded expanded polystyrene foam (EPS) insulation. They are designed to be factory- or field-applied to provide insulation for metallic air duct fittings of various types.

Where installation is in accordance with this report, neither a thermal nor an ignition barrier is required to separate the insulators from the building's interior.

**3.2 Materials:**

The DucTite® R-6 and the DucTite® R-8 insulators are molded using Huntsman Grade 54 modified EPS beads as recognized in ICC-ES evaluation report [ESR-1634](#). The DucTite® R-6 insulators have a nominally 1.5-inch-thick (38.1 mm) wall and a nominal density of 1.5 lbs/ft<sup>3</sup> (24 kg/m<sup>3</sup>), yielding an R-value of 6 (hr ft<sup>2</sup> °F)/Btu (1.06 k m<sup>2</sup>/W). The DucTite® R-8 insulators have a nominally 2-inch-thick (50.8 mm) wall and a nominal density of 1.5 lbs/ft<sup>3</sup> (24 kg/m<sup>3</sup>), yielding an R-value of 8 (hr ft<sup>2</sup> °F)/Btu (1.41 k m<sup>2</sup>/W).

The EPS foam plastic used in the manufacture of the DucTite® R-6 and DucTite® R-8 insulators has a flame-spread index of 25 or less and a smoke-developed index of 200 or less when tested in accordance with ASTM E 84 at the thickness and density used. The material does not flame, glow, smolder or smoke when tested in accordance with ASTM C 411 at temperatures that do not fall below 250°F (121°C).

**4.0 INSTALLATION**

DucTite® insulators shall be installed in accordance with this report, the applicable code and the manufacturer's published installation instructions. In the event of a conflict between this report and the installation instructions, this report shall govern.

The metal HVAC duct fitting is placed on a firm surface with the collar pointed upward. The DucTite® insulator, if in the form of a one-piece insulator, is slipped over the fitting with the collar extending through the hole. In the instance where the DucTite® insulator is in the form of two halves, a right and a left half are placed around the fitting and joined together with internal plastic fasteners. When properly seated, approximately 2 inches (50.8 mm) of the duct fitting will extend beyond the DucTite® insulator.

**5.0 CONDITIONS OF USE**

The DucTite® R-6 and the DucTite® R-8 insulators described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1** The products shall be limited to use in buildings of IBC Type V construction, and all construction types permitted under the IRC.

- 5.2 The amount of these products installed shall be limited to an aggregate total of 13 pounds (5.9 kg) of products for each 1000 square feet (92.9 m<sup>2</sup>) of floor area.
- 5.3 The DucTite<sup>®</sup> R-6 and the DucTite<sup>®</sup> R-8 insulators are limited to use on metallic fittings and shall not be used on straight lengths of HVAC ducts.
- 5.4 The products are produced for M&M Manufacturing Company by Lifoam Industries, LLC located in Waxahachie, Texas, under a quality control program with inspections by Underwriters Laboratories, Inc. (AA-668).

#### 6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Prefabricated Duct Fitting Insulation Manufactured from Molded, Expanded Polystyrene Foam Plastic (AC263), dated June 2004.

#### 7.0 IDENTIFICATION

Each DucTite<sup>®</sup> R-6 and DucTite<sup>®</sup> R-8 air duct fitting insulator shall be labeled with the name of one of the companies noted at the beginning of this report (M&M Manufacturing LLC; Cody Company, Inc.; or Crown Products Co., Inc.), part description, weight, R-value, mass per area limitation [13 pounds for each 1000 square feet (5.9 kg per 92.9 m<sup>2</sup>)], inspection agency name (Underwriters Laboratories, Inc.), date and shift code, the number of this evaluation report (ESR-1228), and the number of the bead supplier's evaluation report ([ESR-1634](#)).